

The Endangered Species Act and the Salmon Listings*

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Introduction

Salmon populations on the west coast have been declining since before the turn of the 20th century. In 1990, those declines caused chinook salmon (in the Sacramento River) to be considered an endangered species under the Endangered Species Act (ESA).⁽¹⁾ Since 1990, the federal government has determined that steelhead, chinook, coho, chum, and cutthroat trout all qualify as threatened species under the ESA throughout much of the Pacific Northwest.⁽²⁾ Most of these determinations occurred in March of 1999 and now cover much of the state, from Enterprise and La Grande; west to Pendleton, Portland, and Astoria; south to Newport, Florence, and Brookings, and inland to Medford, Roseburg, Eugene, Corvallis, and Salem.⁽³⁾

The ESA prohibits anyone from harming an endangered species.⁽⁴⁾ It also authorizes federal agencies to adopt rules that prohibit anyone from harming a threatened species, an activity which the federal government has recently undertaken.⁽⁵⁾ These prohibitions can include actions or inactions by governments that allow someone to undertake an activity which directly or indirectly can harm a threatened or endangered species. As a result of the federal government's actions in declaring salmon populations throughout Oregon as endangered or threatened species, governments need to modify their actions to ensure that they do not run afoul of the ESA; failure to do so places governments, and government officials, at risk of civil and criminal penalties, as well as citizen suits.

These materials are intended to provide a primer on the ESA, the federal government's determination that salmon species are threatened, and the ramifications for local governments as a result of those listings. Part I provides an overview of the ESA. Part II then discusses the listing process, including an explanation of the factors that led the federal government to conclude that the species needed protection. Part III describes the requirement for consultation on any project (public or private) that involves federal funding, permitting or action. Part IV explains the ESA's prohibitions on "takes" of (*i.e.*, causing harm to) protected species. Part V summarizes the mechanisms for obtaining authorization from the federal government for incidental "takes." Part VI explains the enforcement

options available under the ESA, including penalties and citizen suits. Finally, part VII identifies some basic strategies for responding to the listings and the 4(d) rules.

*This document has been prepared by the author as a public service, and does not necessarily represent the position of the City of Eugene. The document provides a general discussion of the Endangered Species Act, and is not intended to constitute legal advice. This document will be updated following significant events. It was last updated July 31, 2000. Suggestions for changes or corrections are welcome, and can be forwarded to the author at glenn.klein@harrang.com.

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I. Overview of the Endangered Species Act

In 1966, Congress first passed the Endangered Species Preservation Act.⁽⁶⁾ In 1973, Congress amended the act to create what is now known as the Endangered Species Act, with the stated purpose to conserve both the ecosystems upon which endangered and threatened species depend, and the endangered and threatened species themselves.⁽⁷⁾ Although Congress has amended the ESA on several occasions since then, the basic framework and policy have remained unchanged, requiring that all federal departments and agencies seek to conserve endangered and threatened species.⁽⁸⁾

The ESA divides responsibility for administering the ESA between the Secretary of the Interior and the Secretary of Commerce.⁽⁹⁾ The Secretary of the Interior or primarily the Interior's Fish and Wildlife Service (FWS) is responsible for all terrestrial and freshwater species.⁽¹⁰⁾ The Secretary of Commerce or primarily the National Marine Fisheries Service (NMFS) is responsible for all marine and anadromous species.⁽¹¹⁾ These two agencies FWS and NMFS have jointly promulgated regulations (see 50 CFR parts 401 - 453) to fulfill these duties. (The two agencies collectively will be referred to as "the Services.")

The ESA contains six major provisions. Section 4 governs the circumstances under which FWS and NMFS can list a species as threatened or endangered and designate the species habitat as "critical habitat".⁽¹²⁾ Section 7 imposes requirements upon all federal agencies to consult with FWS or NMFS on any federal action including those that are funded, permitted, or conducted by a federal agency that may affect a listed species or designated critical habitat.⁽¹³⁾ Section 9 prohibits the "taking" or harming of any endangered species.⁽¹⁴⁾ Section 4(d) authorizes FWS and NMFS to adopt administrative rules to impose the same type of "take" prohibitions for threatened species.⁽¹⁵⁾ Section 10 authorizes the Services to grant exceptions to the "take" prohibitions of sections 9 and 4(d).⁽¹⁶⁾ And finally, section 11 creates civil and criminal penalties and authorizes citizen suits, for violations of the ESA, any implementing regulations, and any permits issued under the ESA or the regulations.⁽¹⁷⁾

II. The Section 4 Listing Process:

Determinations of Endangered/Threatened Species and Critical Habitat

A. Listing of species as endangered or threatened

1. The law

Under section 4 (Section 1533) of the ESA, the Secretary of the Interior is obligated to maintain lists of endangered or threatened species.⁽¹⁸⁾ For species the Secretary of Commerce oversees, the Secretary of Commerce will instruct the Secretary of the Interior to list, delist, or reclassify such species.⁽¹⁹⁾ To determine whether a species should be listed, the Services maintain a candidate list compiled through input by the Services' biologists, other federal agencies, state governments, and private groups and individuals.⁽²⁰⁾

In addition to the candidate list, species can become listed through a formal petition process.⁽²¹⁾ The petition process authorized by the ESA allows anyone to petition the Secretary to have a species listed, reclassified or removed.⁽²²⁾ Once the Secretary has been petitioned, the ESA requires the Secretary to determine within 90 days whether the listing may be warranted and then, within one year, to find whether the listing is or is not warranted.⁽²³⁾ If the listing is determined to be warranted, the Secretary must list the species in less than 30 days or determine that this immediacy is precluded by other priority listing activities.⁽²⁴⁾ In the latter circumstance, the Secretary must make expeditious progress with the listing of species overall and must reexamine the warranted but precluded species each year until listed.⁽²⁵⁾

A species will be listed as "endangered" if the Secretary determines that the species is in danger of extinction within the foreseeable future throughout all or a significant portion of its range.⁽²⁶⁾ Species may be listed as "threatened" if the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.⁽²⁷⁾ Listing decisions must be based exclusively on consideration of the following factors:

- present or threatened destruction, modification, or curtailment of its habitat or range;
- overutilization for commercial, recreational, scientific, or educational purposes;
- disease or predation;
- inadequacy of regulatory mechanisms; and
- other natural or man-made factors affecting its continued existence.⁽²⁸⁾

Economic considerations are not permitted in the decision-making process to list a species.

Once the Secretary has determined that a listing is warranted, the Secretary must promulgate a rule to list the species.⁽²⁹⁾ This rule-making must undergo standard federal procedures. A proposed rule must be published in the Federal Register 90 days or more before the effective date of the listing.⁽³⁰⁾ Once published, anyone can comment via letter.⁽³¹⁾ In addition, anyone can request in writing that a public hearing be held within 45 days of the publishing of the proposed rule.⁽³²⁾ After the public comment period, the Secretary is required to either publish a final listing rule, withdraw the proposal for listing, or extend the proposed rule for an additional six months.⁽³³⁾

2. Listing of salmon species

In 1990, the Sacramento River winter-run chinook became the first salmon species to be listed under the ESA.⁽³⁴⁾ During the next two years, three other salmon species were listed: Snake River fall-run chinook, Snake River spring/summer-run chinook, and Snake River sockeye.⁽³⁵⁾

From the point of the first salmon listing, environmental groups have continued to petition the Services to list different salmon species. In 1994, these petitions convinced NMFS to undertake extensive research on salmon populations and their rate of survival. Between the time research began and 1999, the Services listed ten additional salmon species under the ESA. Eight of these species were listed as threatened and two as endangered. These species were located in California, Oregon, Washington and Idaho. This rapid increase in salmon listings peaked in 1998 when NMFS proposed listing 13 additional salmon species.⁽³⁶⁾

On March 16, 1999, NMFS listed nine species of salmon in the Pacific Northwest.⁽³⁷⁾ These nine species include one endangered listing and eight threatened listings.⁽³⁸⁾ The Upper Columbia River spring-run chinook was listed as endangered.⁽³⁹⁾ Each of the following were listed as threatened: Puget Sound chinook; Lower Columbia River chinook; Upper Willamette River spring-run chinook; Hood Canal summer-run chum; Columbia River chum; Upper Willamette River steelhead; Middle Columbia River steelhead; and Ozette Lake sockeye.⁽⁴⁰⁾ In addition, NMFS deferred the listing of four additional species for six months.⁽⁴¹⁾

The final rules for the listings were published as two rules. The first, published on March 24, 1999, addressed the listing of the four chinook species and the deferment for listing four other chinook species.⁽⁴²⁾ Then on March 25, the rule for the additional five species was published.⁽⁴³⁾ Those rules contain much information about the listed salmon species, including a summary of factors affecting the listed species. Knowing why the Services believe that salmon populations are declining will be critical in developing proposals for projects, section 4(d) exceptions, materials for section 7 consultations, habitat conservation plans and applications for incidental take permits: unless a person or entity can convince the Services that its proposal will not further contribute to that decline, the Services will not approve the proposal. The following discussion summarizes the factors which led to the salmon listings.

The declines in salmon populations have been due to both natural and human factors, according to the Services.⁽⁴⁴⁾ Those factors include reduction or elimination of historically accessible habitat as a result of water storage, withdrawal, conveyance, and diversions for agriculture, flood control, domestic, and hydropower purposes.⁽⁴⁵⁾ Changes to the natural flows of streams have resulted in increased water temperatures, insufficient flows for migration, spawning and flushing of sediments from spawning gravels.⁽⁴⁶⁾ Dams (primarily turbines and sluiceways) have caused increased mortality of adult and juvenile salmonids.⁽⁴⁷⁾

Land use activities related to urban development, road construction, and logging also have significantly altered fish habitat quantity and quality.⁽⁴⁸⁾ As a result of these activities, stream bank and channel morphology has changed; ambient stream water temperatures have been altered; water quality has been degraded; spawning and rearing habitat has been eliminated; and riparian vegetation has been removed resulting in increased stream bank erosion.⁽⁴⁹⁾

Actions of local governments, like those of private parties, have contributed to the problem. Indeed, local governments' dual roles regulator and proprietor both have "contributed" to the problems. As a regulator, a local government makes decisions about the actions of individuals and other private and public entities that may affect the listed salmon, including the adoption of local laws and rules and the issuance of permits and licenses. Local governments also function, like private entities, as proprietors. Development and maintenance are the primary activities local governments undertake as proprietors that may be affected by the salmon listings.

NMFS has identified a number of specific activities carried out or authorized by local governments that it believes have a high likelihood of affecting salmon habitat:

- Planning, zoning, and development permitting
- Erosion and sediment control
- Floodplain management
- NPDES permit implementation
- Water use
- Stormwater discharge
- Wastewater discharge
- Road and bridge construction and maintenance
- Pesticide, herbicide, fertilizer, and other chemical use
- Riparian area protection, alteration, or development
- Wetland protection, alteration, or development
- Estuarine shorelands protection, alteration, or development ⁽⁵⁰⁾

B. Designating critical habitat

1. ESA requirements

In addition to regulations regarding the listing of the species, the Services also must propose designations of "critical habitat" or find that the habitat designation is not prudent or determinable.⁽⁵¹⁾ The designation of critical habitat does not, by itself, restrict activities or mandate particular management or recovery actions. The regulatory impact of designating critical habitat is through ESA's section 7 consultation provisions for projects with a federal nexus. Under section 7, federal agencies are required to ensure their actions (including actions they fund, permit, or undertake) are not likely to result in the destruction or adverse modification of designated critical habitat.⁽⁵²⁾

If the final rule on an ESA listing does not include critical habitat designation, the Secretary has two years from the proposed rule publication to do so or determine such designation is not prudent.⁽⁵³⁾

When determining critical habitat, the Secretary should consider the "physiological, behavioral, ecological, and evolutionary requirements that are essential to the conservation of a given species and that may require special management considerations or protection."⁽⁵⁴⁾ However, unlike the listing criteria, the critical habitat not only allows but requires economic factors to be considered in the designation of critical habitat.⁽⁵⁵⁾ Once critical habitat is determined, the Secretary must include both a verbal description and a map of the designated critical habitat in the final listing rule or must issue an additional rule containing both elements.⁽⁵⁶⁾

2. Designating habitat for the salmon

In the listing rules, NMFS has not officially designated critical habitat for any of the species. However, NMFS did propose designated critical habitat for all listed and proposed listed steelhead, including the Upper Willamette River steelhead and the Middle Columbia River steelhead, in February of 1999. For the eight other species, NMFS requested in the March 1999 listing the one year extension to determine critical habitat.

III. The Section 7 Consultation Process

A. Overview of consultation process

Section 7 of the ESA requires that every federal agency consult with FWS or NMFS whenever any activity funded, permitted, or conducted by that federal agency (a) may affect a species listed as threatened or endangered, or (b) is likely to jeopardize a proposed species or adversely modify proposed critical habitat.⁽⁵⁷⁾ Because of the broad definition given to agency action and the inclusion of projects funded or authorized by federal agencies, the consultation and conference requirements extend to projects or activities of private parties as well as local and state governments. The consultation procedure varies depending on the gravity of the project, its effects on the species or habitat, and the stage at which it is invoked. This section first describes when consultation is required (*e.g.*, new projects, some existing projects). It then discusses the five primary components of the Section 7 process (*i.e.*, early consultation, biological assessment, informal consultation, formal consultation, and conference⁽⁵⁸⁾).

B. When consultation required

Section 7 requires consultation with NMFS or FWS for any "federal action" which may affect a listed species. This could include actions by a local government either as a regulator issuing any permit or license under a federal program, or as a proprietor taking any action in conjunction with the federal government that may affect the salmon or its critical habitat.

To determine whether a Section 7 consultation is required for a local government project/action, one must first determine whether the project falls under the definition of a "federal agency action." The ESA does not define "federal agency action" itself but does provide separate definitions of "federal agency" and "action". Federal agency is defined as "any department, agency, or instrumentality of the United States." Action is defined as "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas." To help clarify any confusion, the Services have included in the Code of Federal Regulations some examples of federal agency action under the ESA, including "(a) actions intended to conserve listed species or their habitat; (b) the promulgation of regulations; (c) the granting of licenses, contracts, leases, easements, rights-of-way, permits, or grants-in-aid; or (d) actions directly or indirectly causing modifications to the land, water, or air." It is clear from these broad definitions that because of the salmon listing, any future local government action that requires federal involvement, including funding or authorization, would require a Section 7 consultation if it may affect a listed salmon species or destroy or adversely modify designated critical habitat.

While the requirements of future actions are easily determined from the definitions, past and present projects are not as easy. Nonetheless, past and present actions that have continuing federal involvement may still require a section 7 consultation. Courts have found that a federal agency improperly failed to reinitiate consultation after a new species had been listed. In addition, the regulations under the ESA specifically provide for the reinitiation of consultation when a new species is listed that may be affected by the action. This consultation requirement (for reinitiation) appears to be limited to actions "where discretionary Federal involvement or control over the action has been retained or is authorized by law."

In the Ninth Circuit, the precedent on reinitiating consultation has been delineated by two primary cases: *Pacific Rivers Council v. Thomas*⁽⁵⁹⁾ and *Sierra Club v. Babbitt*.⁽⁶⁰⁾ In *Pacific Rivers Council*, the court held that Land Resource Management Plans (LRMP's) for timber sales, road building projects and other activities in national forests "have an ongoing and long lasting effect even after adoption" and therefore required reinitiation of consultation after the listing of the new species.⁽⁶¹⁾ In *Sierra Club*

v. Babbitt, the court found that a right-of-way agreement between BLM and a private party to construct a logging road did not require reinitiation of consultation because discretion was not retained.⁽⁶²⁾

In addition, in the bedrock ESA case, *Tennessee Valley Authority v. Hill*⁽⁶³⁾, the Supreme Court found that an extensive and costly dam project that was begun prior to the enactment of the ESA could not go forward because it jeopardized a listed species.⁽⁶⁴⁾ In fact, the Court in *TVA*, relying on Congressional history, found that "Congress . . . foresaw that Section 7 would on occasion require agencies to alter ongoing projects in order to fulfill the Act goals."⁽⁶⁵⁾ This holding is a strong indication that consultation procedures or other provisions of the ESA are not automatically precluded simply because the action began prior to the listing. For these reasons, any ongoing federal agency action that retains discretionary involvement and which may affect the newly listed salmon or destroy or adversely modify its designated critical habitat may require a Section 7 consultation.

Finally, it is important to note that the ESA allows federal agencies to promulgate their own regulations for conducting section 7 consultations.⁽⁶⁶⁾ While none have taken advantage of this so far, the section 7 consultation handbook published by the Services last year suggests that there are efforts to do so.⁽⁶⁷⁾

C. How the consultation process works

The Services provide two different types of processes. The first process, called "consultation," applies to actions that may affect a species listed as threatened or endangered. The second process, called "conference," applies to actions that may affect a species that has been proposed for listing.

1. Projects that may affect a *listed* species

a. Early consultation

Early consultation is not required by the ESA but is an optional process to determine if a proposed action is likely to jeopardize a listed species or destroy or adversely modify critical habitat.⁽⁶⁸⁾

Prospective federal permittees or licensees frequently request a federal agency to initiate early consultation with the Services prior to formal application, to receive advisory information on how to address potential conflicts between the action and the species or habitat.

To initiate early consultation, a potential applicant must demonstrate that "it has a definite proposal outlining the action and its effects and that it intends to implement this proposal."⁽⁶⁹⁾ The early consultation typically follows the formal consultation procedures (discussed below). If the action is a "major construction activity," then a biological assessment is required prior to early consultation.⁽⁷⁰⁾ An early consultation is concluded when the Services issue a preliminary biological opinion.⁽⁷¹⁾

Once an agency has completed early consultation, the agency can formally apply for the permit or license.⁽⁷²⁾ However, prior to issuance of the permit or license (or approval of funding), the Service must confirm its preliminary biological opinion as a final biological opinion to end the consultation process.⁽⁷³⁾ If the Service cannot confirm its earlier opinion, then the agency must initiate formal consultation.⁽⁷⁴⁾

b. Biological assessment

A biological assessment addresses any potential effects on listed and proposed species and on designated and proposed critical habitat that are likely to be adversely affected by the potential action.⁽⁷⁵⁾ "Major construction activities," which are similar to "major federal actions" under the NEPA, require a biological assessment.⁽⁷⁶⁾ In addition, agencies may, but are not required to, conduct a biological assessment for other actions.⁽⁷⁷⁾ However, if a listed species or critical habitat is likely to be affected by a non-major construction activity, the agency still must provide the Service with a basis for evaluating the likely effects of the proposed action.⁽⁷⁸⁾

The biological assessment is used by the Services to determine whether formal consultation or a conference is necessary. The assessment generally should include results of on-site inspections determining the presence of listed or proposed species; an analysis of the likely effects of the action on the species or habitat; review of the literature; and the views of species experts.⁽⁷⁹⁾

c. Informal consultation

When undertaking any action, federal agencies are required to address the action's effects on listed species.⁽⁸⁰⁾ Frequently agencies will request from the Services a species list to help assess these effects. This request often initiates an informal consultation. Although optional, the Services recommend informal consultation to assess at an early stage the potential effects on a listed species or critical habitat. Informal consultations:

- assist in identifying whether the proposed action area includes listed or proposed species, and designated or proposed critical habitat;
- determine what effect the proposed action may have on the identified species or critical habitat;
- study alternatives to modify the action to reduce or remove adverse effects to the species or critical habitats; and
- determine whether formal consultation is required.⁽⁸¹⁾

Informal consultation consists of unstructured communication between a federal agency and the Services that results in a determination by the Services that formal consultation is or is not required.⁽⁸²⁾ If the Service determines that the proposed action is likely to adversely affect listed species or adversely modify critical habitat, then formal consultation is required.⁽⁸³⁾

On the other hand, no formal consultation would be necessary if the Service determines that the proposed action (a) would not affect listed species or destroy or adversely modify designated critical habitat; or (b) "may affect, but is not likely to adversely affect species or adversely modify critical habitat."⁽⁸⁴⁾ The latter conclusion is appropriate only if all of the effects to the species or critical habitat are expected to be beneficial, discountable, or insignificant.⁽⁸⁵⁾ "Beneficial effects" are contemporaneous positive effects without any adverse effects to the species.⁽⁸⁶⁾ "Insignificant effects" relate to the size of the impact and should never reach the scale where a "take" (see section 9 discussion below) occurs.⁽⁸⁷⁾ "Discountable effects" are those extremely unlikely to occur.⁽⁸⁸⁾

d. Formal consultation

If an agency action is found to likely affect (adversely) a listed species or critical habitat, the federal agency must initiate formal consultation, regardless of whatever other consultation procedures have been undertaken.⁽⁸⁹⁾ At the conclusion of a formal consultation, the Services issue a biological opinion determining whether the action is likely to jeopardize the continued existence of the listed species or result in the destruction or adverse modification of critical habitat.⁽⁹⁰⁾ If the Service concludes "no jeopardy," the action can go ahead.⁽⁹¹⁾ In addition, if a "no jeopardy" determination concludes that incidental take of the species is likely to occur, the Service must issue an incidental take statement with its biological opinion.⁽⁹²⁾ This incidental take statement is similar to incidental take permits required of non-federal entities under sections 9 and 10 of the ESA.

If the Service concludes "jeopardy," reasonable and prudent alternatives should be included if available.⁽⁹³⁾ If, in the end, the action cannot be modified to produce a "no jeopardy" conclusion, then the project cannot go forward unless granted an exemption from a Cabinet level committee.⁽⁹⁴⁾

2. Projects that may affect a *proposed* species

a. Informal conference

Early consultation, informal consultation, and formal consultation all apply to actions that may affect either listed species or designated critical habitat. For actions that may affect *proposed* species or habitat, the federal agency is required to conduct a "conference" (rather than a "consultation") with the Services.⁽⁹⁵⁾ A conference is early interagency communication, formal and informal, regarding the likely impact of the proposed action. If the agency action involves an applicant, the applicant should be involved.⁽⁹⁶⁾

Although an informal conference is only required for proposed actions that are likely to affect a proposed species or critical habitat, an agency can request an informal conference at any time it fears a proposed project may affect a proposed species or habitat.⁽⁹⁷⁾ Because the Services offer guidance on how to avoid or minimize the effects on the proposed species or habitat, initiating an informal conference could help an agency redesign a project to avoid further consultation procedures or determine whether the project is worthwhile for the agency.⁽⁹⁸⁾

Once an informal conference is completed, the Service will issue a report advising the agency how to avoid jeopardizing the proposed species or adversely affecting proposed critical habitat.⁽⁹⁹⁾ Since these species have not yet been listed, the agency is not prohibited from such actions at this time, regardless of the jeopardy finding. If the Services subsequently list the species or designate this critical habitat, the informal conference does not preclude the agency or its action from additional consultation requirements nor from applicable enforcement measures.⁽¹⁰⁰⁾

b. Formal conference

An agency also can initiate a formal conference that follows the same procedure as a formal consultation, except that it is for a proposed species or proposed critical habitat.⁽¹⁰¹⁾ The opinion issued at the end of a formal conference could be adopted as the biological opinion when the species is listed

or critical habitat is designated as long as there is no significant new information about the species or habitat and the action has not been altered significantly.⁽¹⁰²⁾

IV. Prohibitions on "Takes" of Protected Species Sections 9 and 4(d)

Section 9 of the ESA, and rules adopted under section 4(d) of the ESA, prohibit "takes" of endangered and threatened species. The first part of this section describes what constitutes a "take." The next part discusses the section 9 prohibition for *endangered* species. The last part explains the prohibition under section 4(d) for *threatened* species.

A. What actions constitute "takes"

The ESA comprehensively defines "take" to encompass any direct or indirect harm to the species.⁽¹⁰³⁾ "Take" means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct."⁽¹⁰⁴⁾ "Harass," in turn, is defined as any intentional or negligent act that creates the likelihood of injuring a species by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering.⁽¹⁰⁵⁾ "Harm" is any act that, directly or indirectly, kills or injures a listed species, including habitat modification or degradation that significantly impairs essential behavioral patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering.⁽¹⁰⁶⁾

As noted above, takes include not only direct effects, but also indirect. For governmental entities, takes can include both action and the failure to take action. For example, courts have found takes as a result of the following governmental actions that authorized otherwise lawful behavior but which, under certain circumstances, indirectly resulted in a take:

- EPA's mere registration of pesticides containing strychnine was found to have violated the ESA. According to the Court: "The EPA's strychnine registrations had a prohibited impact on endangered species. First, the record shows endangered species have eaten the strychnine bait, either directly or indirectly, and as a result, they have died. . . Second, strychnine can be distributed only if it is registered. Consequently, the EPA's decision to register pesticides containing strychnine or to continue these registrations was critical to the resulting poisonings of endangered species. The relationship between the registration decision and the deaths of endangered species is clear. We thus conclude the EPA's registrations constituted takings of endangered species." *Defenders of Wildlife v. EPA*, 882 F2d 1294 (8th Cir. 1989).

- Massachusetts' issuance of licenses for gillnetting and lobster pot fishing constituted an unlawful take of the endangered Northern Right whale. The endangered whales occasionally became entangled with the fishing gear. The Court found that the issuance of the license was an indirect cause of the take: "The statute [ESA] not only prohibits the acts of those parties that directly exact the taking, but also bans those acts of a third party that brings about the acts exacting a taking. We believe that . . . a governmental third party pursuant to whose authority an action directly exacts a taking of an endangered species may be deemed to have violated the provisions of the ESA." *Strahan v. Cox*, 127 F3d 155 (1st Cir. 1997).

Courts also found unlawful takes as a result of a government's **failure** to adequately regulate or prohibit activities which are harmful to protected species:

- Federal agency's failure to prohibit the use of lead shot in certain parts of the country constituted an unlawful take of the bald eagle. Evidence at trial indicated that most lead shot that poisoned bald eagles was consumed by the eagles when they fed upon other migratory birds that were themselves either ill due to consumption of lead shot, or had been wounded or killed by lead shot but had not been retrieved by the hunters. The Court concluded that the federal agency's failure to prohibit the use of the lead shot for hunting constituted a taking of the eagle. *National Wildlife Federation v. Hodel*, 15 ELR 20891 (1985).
- County's failure to prohibit artificial lighting on certain beaches and its failure to prohibit vehicular access on its beaches could constitute unlawful takes of endangered sea turtles. The appellate court concluded that the County could be found "liable for 'harmfully' inadequate regulation of artificial beachfront lighting." The trial court earlier also had concluded that the County had authority to regulate vehicular access to its beaches, and since the county permitted others to drive upon its beaches, the County assumed the responsibility for ensuring that those vehicles did not take federally protected species. *Loggerhead Turtle v. County Council of Volusia County, Florida*, 148 F 3d 1231 (11th Cir. 1998); 896 F Supp 1170 (1995). But see *Loggerhead Turtle v. County Council*, 92 F Supp 2d 1296 (MD Fla 2000) (County did not engage in a "take" where it adopted an ordinance that prohibits, restricts and limits artificial beachfront lighting, but its residents are failing to comply with the ordinance. In other words, it appears that failure to take enforcement action for violation of an ordinance will not constitute a "take" under the ESA).
- City's failure to prohibit vehicles onto its beaches constituted unlawful take of a protected shorebird the piping plover. The Court concluded that the city, through inaction, had caused

the illegal taking of the plover. The Court required the City to prohibit off road vehicles from parts of the beach unless the city implemented court specified protection measures. *United States v. Town of Plymouth, Massachusetts*, 6 F Supp 2d 81 (1998).

Thus, a take can include direct actions, indirect actions, and the failure to take any action.

B. Prohibition on Take of *Endangered* Species Section 9

Section 9 of the ESA prohibits any person from "taking" any *endangered* species; section 9 does not automatically apply to *threatened* species.⁽¹⁰⁷⁾ Instead, "takes" of *threatened* species are prohibited only if the Services adopt rules under section 4(d) of the ESA (discussed below) to prohibit such takes.⁽¹⁰⁸⁾

A local government that authorizes an activity that specifically causes a take may be found in violation of the section 9 take prohibition. Thus, for example, a "take" could occur by a local government as a result of permitting construction to occur in a manner that results in such significant sedimentation that it impairs salmon survival.

The ESA authorizes exceptions to the take prohibitions.⁽¹⁰⁹⁾ Incidental take statements can be included in a biological opinion following formal consultation under section 7 of the ESA (discussed above).⁽¹¹⁰⁾ Also, an incidental take permit can be issued pursuant to section 10 (discussed below).⁽¹¹¹⁾

C. Prohibition on Take of *Threatened* Species Section 4(d)

As noted above, the prohibition in section 9 on takes of *endangered* species automatically applies only to endangered species and not to threatened species. Section 4(d), however, grants the Services the authority to adopt rules that prohibit takes of threatened species to the same extent that section 9 prohibits takes of endangered species.⁽¹¹²⁾ Section 4(d) authorizes the Services, whenever any species is listed as a threatened species, to issue "such regulations as [the Secretary] deems necessary and advisable to provide for the conservation of such species."⁽¹¹³⁾

At the end of 1999, NMFS published notice of three proposed rules under section 4(d) for the listed salmon species.⁽¹¹⁴⁾ It accepted comments on the proposed rules through February 2000, and published its final rules in the Federal Register on July 10, 2000.⁽¹¹⁵⁾ One rule applies to all listed salmonid

species. The rule takes effect for steelhead on September 8, 2000, and for all listed salmon species on January 8, 2001.

The 4(d) rule provides that the ESA section 9 take prohibitions will apply to most, but not all, actions carried out by government entities and private parties except those activities covered by thirteen exceptions, called "limits" by the rule. For activities identified as "limits", application of the take prohibition is limited: NMFS has determined that these activities sufficiently minimize impacts on threatened species that additional protection is not necessary. Before discussing those limits, this paper will first note the types of activities that NMFS believes may constitute takes under this final rule.

1. Activities that may constitute unlawful takes under the 4(d) rule.

NMFS has identified activities it believes likely would constitute "takes." In the preamble to the 4(d) rule, NMFS offers guidance as to the activities that it believes may constitute unlawful takes in the absence of a "limit" in the 4(d) rule, an incidental take statement as part of a section 7 consultation, or an incidental take permit under section 10. NMFS has identified the following 16 categories of activities that are most likely to harm the listed species, and upon which it will focus its enforcement efforts:

- Construction or maintenance of structures like culverts or dams that eliminate or impede a listed species' ability to access habitat.
- Discharge of pollutants (including sewage effluent) into a listed species' habitat.
- Removal, poisoning, or contamination of plants, fish, wildlife, or other biota that the listed species require for food or shelter.
- Removal or alteration of rocks, soil, gravel, vegetation or other physical structures essential to the species' habitat.
- Removal of water or other alteration of streamflow in a manner that significantly impairs spawning, migration or feeding.
- Release of non-indigenous or artificially propagated species into a listed species' habitat or into areas where they may gain access to that habitat.
- Construction or operation of dams or water diversion structures with inadequate fish screens or passage facilities.
- Construction, maintenance or use of inadequate bridges, roads, or trails on stream banks or unstable hill slopes adjacent to or above a listed species' habitat.

- Timber harvest, grazing, or other operations that substantially increase the amount of sediment going into streams.
- Land-use activities that disturb soil and increase sediment delivery to streams such as logging, grazing, farming, and road construction in riparian areas.
- Illegal fishing.
- Streambed disturbances that trample eggs or trap adult fish preparing to spawn, including egg trampling or smothering by livestock in the streambed or by vehicles or equipment being driven across or down the streambed.
- Illegal interstate and foreign commerce dealing in listed salmon or steelhead.
- Alteration of lands or waters in a manner that promotes unusual concentrations of predators.
- Shoreline and riparian disturbances that retard or prevent the development of certain habitat characteristics upon which the fish depend (*e.g.*, removal of riparian trees which reduces vital shade and cover).
- Fill or isolation of side channels, ponds, and intermittent waters that destroy habitats upon which listed species depend for refuge during high flows.⁽¹¹⁶⁾

2. "Limits" or exceptions to the prohibition on take in the 4(d) rule.

As part of the 4(d) rule, NMFS include two types of exceptions from, or "limits" on, the take prohibition described in the rules. First, NMFS has evaluated and determined that no additional protection is needed for certain programs (such as ODOT's road maintenance program). Second, NMFS has developed specific criteria that NMFS will use to evaluate programs still to be developed and submitted to NMFS for review.

In the rules, NMFS emphasizes that it is not requiring governments or private parties to change their practices to conform to any of the take limitations described in the rules. The "limits" describe one way to be sure you are not at risk of violating the take prohibition or of consequent enforcement actions. However, many programs and activities exist which fall outside the exceptions and yet, do not adversely affect threatened salmon. Thus, not being within an exception or limit does not mean that someone is violating the ESA or the 4(d) rules. Not being within a limit does mean that you are at risk of ESA penalties if your activity takes a listed fish. Conforming to a limit provides assurance that one's activities are not violating the take prohibitions and will not be subject to enforcement.

NMFS included in the 4(d) rule 13 limitations or exceptions, some of which are complete programs (such as ODOT's road maintenance manual), and others which are criteria based (such as habitat restoration activities). The following limitations are those that are most applicable to local governments.

- Activities conducted under an ESA permit (*i.e.*, section 7 or section 10 of the ESA).
- Habitat restoration activities conducted pursuant to state-certified watershed conservation plans (WCP), if the state's guidelines have received NMFS's approval. Approval of the state's guidelines by NMFS requires federal rulemaking notice and comment periods. The approved guidelines also are subject to periodic NMFS review.
- Physical diversion of water from lakes and streams, if proper screening is used, under specified circumstances.
- Routine road maintenance by ODOT conducted pursuant to ODOT's road maintenance manual. Road maintenance programs of other governmental bodies with substantially similar features may receive NMFS approval, as well. For a state, city, county or port program that is equivalent to the ODOT program to receive a limit, it must get written approval from the NMFS.
- Portland Parks Integrated Pest Management program. This limit is available only to the city of Portland, and not to other jurisdictions.
- Municipal, Residential, Commercial and Industrial Development and Redevelopment (MRCI). NMFS will not apply take prohibitions to (1) MRCI development or redevelopment conducted in accordance with city, county, or regional government ordinances or plans that NMFS has found to adequately protect listed species; or (2) once NMFS has determined that Metro's Functional Plan is adequate, activities conducted pursuant to ordinances that Metro has found comply with that Functional Plan. NMFS must agree in writing that the MRCI development ordinances and plans, including the Functional Plan, ensure that the plans and the development activities complying with them will conserve listed salmon and steelhead. NMFS will individually apply the following 12 evaluation considerations when determining whether MRCI development ordinances or plans adequately conserve listed fish:
 1. Avoidance of inappropriate areas such as steep slopes and wetlands.
 2. Avoidance of stormwater discharge impacts to water quality and quantity.
 3. Protection of riparian buffers around all perennial and intermittent streams, lakes or wetlands.

4. Avoidance of stream crossings by roads and minimization of impacts to streams when crossing is unavoidable.
5. Protection of historic stream meander patterns and channel migration zones and avoidance of hardening of stream banks.
6. Protection of wetlands and wetland functions.
7. Preservation of the capacity of any intermittent or permanent stream.
8. Landscaping with plants that reduce the need for watering and application of herbicides, pesticides and fertilizers.
9. Prevention of erosion and sediment runoff during construction.
10. Assurance that water supply demands for new development do not impact flows needed for threatened salmonids.
11. Provision of necessary enforcement, funding, reporting and implementation mechanisms.
12. Compliance with all state and federal environmental laws.

NMFS will apply two scientific concepts in evaluating certain exceptions to the 4(d) rules: "properly functioning condition" and "viable salmonid populations." Properly functioning condition (PFC) is defined as "the sustained presence of natural habitat-forming processes that are necessary for the long-term survival of salmonids through the full range of environmental variation." PFC is particularly important in evaluating land and water management activities that affect habitat. Viable salmonid populations (VSP) is a scientific concept that involves determining the point at which a subgroup of a salmonid species is considered viable (healthy) or critical (unhealthy). Only those activities that do not increase the risks to critical populations and do not prevent a population from attaining or maintaining viability will receive NMFS approval. The VSP concept is especially important in the hatchery and harvest exceptions.⁽¹¹⁷⁾

For programs to be submitted to NMFS for consideration as an exception under a 4(d) rule, NMFS requires that the following information and analysis be provided:

- A description of the activity or program being proposed, applicable geographic area, and the jurisdiction or entity responsible for overseeing the action/program.
- A description of the listed species and habitat affected by the action. Information should include fish distribution and abundance in the affected area and a description of the type, quantity, and quality of habitat in the affected area.

- A description of the environmental baseline, including a description of existing conditions of water quality, habitat access, riparian areas, stream channels, flow, and watershed indicators.
- A description of the anticipated short-term and long-term impacts of the action on the species (including all life-cycle stages) and its habitat. This description should include both positive and negative impacts and describe how any adverse impacts will be avoided, mitigated, or minimized.
- A description of the certainty of implementation of the program or action.
- A program for monitoring both the implementation and effectiveness of the action.
- An adaptive management approach, as necessary, that uses monitoring information as needed to change actions so as to accomplish objectives.⁽¹¹⁸⁾

V. Habitat Conservation Plans and Incidental Take Permits Section 10

Section 10 authorizes the Services to issue permits to non-federal parties for activities that could result in incidental takes of listed species where those activities are covered by habitat conservation plans (HCPs).⁽¹¹⁹⁾ In other words, section 10 authorizes specific exceptions to the take prohibitions contained in section 9 and any 4(d) rule. These section 10 permits are unavailable to federal activities and non-federal activities that require a federal permit or involve federal funding; incidental takes for activities that have this "federal nexus" are authorized pursuant to incidental take statements through the section 7 formal consultation process.⁽¹²⁰⁾

Section 10 permits are subject to a three-part process.⁽¹²¹⁾ First, the applicant, with assistance from FWS or NMFS, develops an HCP.⁽¹²²⁾ The HCP must detail, at a minimum, the following information:

- Impacts likely to result from the proposed taking of the species for which permit coverage is requested, including (1) delineation of the HCP boundaries or plan area; (2) collection and synthesis of biological data for species to be covered by the HCP; (3) identification of activities proposed in the plan area that are likely to result in incidental take; and (4) quantification of anticipated take levels.
-
- Measures the applicant will undertake to monitor, minimize, and mitigate impacts; the funding that will be made available to undertake such measures; and the procedures to deal with unforeseen circumstances. Mitigation actions under HCPs usually consist of avoiding,

minimizing, or rectifying the impact; reducing or eliminating the impact over time; or compensating for the impact.

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- Alternative actions the applicant considered that would not result in take, and the reasons why such alternatives are not being utilized.⁽¹²³⁾
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Second, the proposed HCP and application for the incidental take permit is announced in the Federal Register, a public review and comment period is provided, and an intra-service section 7 consultation takes place.⁽¹²⁴⁾ Following these activities, the Service makes a determination whether the HCP meets the following statutory issuance criteria:

- The taking will be incidental to otherwise lawful activities and not the purpose of such activities.
-
- The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.
-
- The applicant will ensure that adequate funding for the HCP and procedures to deal with unforeseen circumstances will be provided.
-
- The taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild. (Note that this criterion is the same as section 7's criterion for determining whether a federal action jeopardizes a listed species.)
-
- The applicant will ensure that other measures that the Services may require as being necessary or appropriate will be provided.
-
- The Services have received such other assurances as may be required that the HCP will be implemented.⁽¹²⁵⁾
-

Third, the permittee implements the HCP and its monitoring and funding programs.⁽¹²⁶⁾ One mechanism used by the Services to ensure implementation is an Implementing Agreement, which can

include provisions that define obligations, benefits, rights, and liabilities; assign responsibilities for implementing specific provisions of the HCP; specify responsibilities of the Services; provide for specific mitigation measures; and provide for enforcement of HCP measures.⁽¹²⁷⁾

One benefit of an approved HCP and incidental take permit under section 10 is the "No Surprises" rule adopted in 1998.⁽¹²⁸⁾ The no surprises rule developed because of concern that changing conditions could have drastic consequences for existing incidental take permits. The thrust of the rule is to provide assurances to permittees that they would not be required to take on extensive economic burdens to address unforeseen or changed circumstances.⁽¹²⁹⁾ Under the rule, permittees who received their permits after March 25, 1998, generally will not be subject to additional land-use restrictions or financial compensation for unforeseen effects on species covered under their HCP.⁽¹³⁰⁾

VI. Enforcement Section 11

Section 11 of the ESA provides for civil penalties, criminal penalties, and citizen suits as possible enforcement mechanisms, in addition to judicial enforcement actions by the Services.⁽¹³¹⁾ The civil penalties can range from \$500 to \$25,000 per violation.⁽¹³²⁾ Knowing violations of the ESA, rules adopted pursuant to the ESA, or permits or certificates issued under the ESA can result in civil penalties ranging from \$12,000 to \$25,000.⁽¹³³⁾ Any other violation (*i.e.*, person does not knowingly violate) can be assessed a civil penalty of up to \$500 per violation.⁽¹³⁴⁾

A person who knowingly violates most provisions of section 9 of the ESA is subject to criminal penalties of a fine of not more than \$50,000 or imprisonment of up to one year, or both.⁽¹³⁵⁾ A person who knowingly violates any other provision of the ESA can be fined up to \$25,000, imprisoned up to 6 months, or both.⁽¹³⁶⁾

Section 11 also allows public enforcement of the ESA via citizen suits.⁽¹³⁷⁾ Citizens can file suits against private entities, the federal government, and state and local governments for ESA violations such as those under sections 9 and 10. In addition, citizens can file suits against the federal agencies for failure to act on requirements under sections 4 and 7. The ESA expressly authorizes the Court to award attorney fees "whenever the court determines such award is appropriate."⁽¹³⁸⁾

VII. Strategies to Ensure Activities Do Not Violate the ESA.

There are several mechanisms for ensuring that projects and activities do not violate the ESA. These include take prevention plans; 4(d) exceptions or limits; section 7 consultations and incidental take statements; and section 10 habitat conservation plans and incidental take permits.

Take prevention plans. A local government can undertake a comprehensive assessment of its activities to determine the potential to affect listed salmon species. This could be accomplished by working through a list of all local government activities, identifying how the activity could affect salmon, assessing the relative likelihood of the effect, and weighing the potential for the local government to influence those effects. (For an example of such an assessment, contact the City of Portland, or access its comprehensive assessment that was placed on the City's website.) After completing that assessment, develop a plan to change those practices or activities that have a significant risk of adversely affecting protected species.

4(d) exceptions. As noted above, NMFS' regulations include "limits" or exceptions to the prohibition on takes for certain programs or types of programs. The effect of such an exception is to assure a person or entity who undertakes the authorized action that no "take" will occur. NMFS has indicated a willingness to consider other local government programs, besides those included in the rule, for inclusion in future amendments to the 4(d) rule.

Section 7 consultations. Where a project has a federal nexus (federal funding, action or permitting), section 7 of the ESA requires the federal agency to consult with NMFS or FWS. At the conclusion of a formal consultation under section 7, NMFS (or FWS) issues a biological opinion determining whether the action is likely to jeopardize the continued existence of the listed species or result in the destruction or adverse modification of critical habitat. If NMFS concludes "no jeopardy," the action can go ahead. In addition, if a "no jeopardy" determination concludes that incidental take of the species is likely to occur, NMFS can issue an incidental take statement with its biological opinion. This incidental take statement is similar to incidental take permits required of non-federal entities under sections 9 and 10, and authorizes the incidental take of the species.

Section 10 incidental take permits. Section 10 of the ESA authorizes NMFS or FWS to issue permits to non-federal parties for activities that could result in incidental takes of listed species where those activities are covered by habitat conservation plans (HCPs). In other words, section 10 authorizes specific exceptions to the take prohibitions contained in section 9 and any 4(d) rule. These section 10 permits are unavailable to federal activities and non-federal activities that require a federal permit or

involve federal funding; incidental takes for activities with that "federal nexus" are authorized pursuant to incidental take statements through the section 7 formal consultation process.

REFERENCES & ADDITIONAL RESOURCES

16 U.S.C. § 1531-43 (Endangered Species Act)

50 C.F.R. § 17.1-17.108 (FWS' regulations for endangered and threatened wildlife and plants)

50 C.F.R. § 222.1-222.42 (NMFS' regulations for endangered fish or wildlife)

50 C.F.R. § 402.1-453.06 (FWS' & NMFS' joint regulations under the ESA)

<http://www.nmfs.gov> (NMFS' homepage)

<http://www.nwr.noaa.gov> (NMFS' Northwest Regional office homepage)

<http://www.nwr.noaa.gov/1salmon/salmesa/final4d.htm> (NMFS' web info on 4(d) rule, including citizens guide and 4(d) rule itself)

<http://www.fws.gov> (FWS' homepage)

<http://www.fws.gov/r9endspp/endspp.html> (FWS' endangered species homepage)

<http://www.oregon-plan.org> (State of Oregon Plan addressing ESA listings)

<http://www.metro.dst.or.us/metro/esa> (Metro ESA response)

ENDNOTES

1. 54 Fed. Reg. 32085 (August 4, 1989)

2. See, www.nwr.noaa.gov/1salmon/salmesa/fedreg.htm

3. See, www.nwr.noaa.gov/1salmon/salmesa/mapswitch.htm

4. 16 U.S.C. § 1538(a)(1)(B) (1999)

5. 16 U.S.C. § 1533(d) (1999)
6. P.L. 93-205 (1966)
7. 16 U.S.C. § 1531 *et seq.* (1999)
8. *Id.*
9. 16 U.S.C. § 1531 *et seq.* (1999)
10. *Id.*
11. *Id.*
12. 16 U.S.C. § 1533 (1999)
13. 16 U.S.C. § 1536 (1999)
14. 16 U.S.C. § 1538 (1999)
15. 16 U.S.C. § 1533(d) (1999)
16. 16 U.S.C. § 1539 (1999)
17. 16 U.S.C. § 1540 (1999)
18. 16 U.S.C. § 1533(c) (1999)
19. 16 U.S.C. § 1533(a)(2) (1999)
20. Listing manual
21. 5 U.S.C. § 553(3) (1999)
22. *Id.*
23. 16 U.S.C. § 1533(b)(3)(A) (1999)

24. 16 U.S.C. § 1533(b)(3)(B)(ii) (1999); C.F.R. § 424.14(a) (1999)
25. 16 U.S.C. § 1533(b)(3)(iii)(II) (1999)
26. 16 U.S.C. § 1532(6) (1999)
27. 16 U.S.C. § 1532(20) (1999)
28. 50 C.F.R. § 424.11(c) (1999)
29. 16 U.S.C. § 1533(b)(3)(B)(ii) (1999)
30. 16 U.S.C. § 1533(b) (1999)
31. 50 C.F.R. § 424.16(c)(2) (1999)
32. 50 C.F.R. § 424.16(c)(3) (1999)
33. 50 C.F.R. § 424.17(a) (1999)
34. 54 Fed. Reg. 32085 (August 4, 1989)
35. See, <http://www.nwr.noaa.gov/1salmon/salmesa/fedreg.htm>
36. 63 Fed. Reg. 11482 (March 9, 1998); 63 Fed. Reg. 11750 (March 10, 1998)
37. 64 Fed. Reg. 14308 (March 24, 1999); 64 Fed. Reg. 14508 (March 25, 1999)
38. *Id.*
39. *Id.*
40. *Id.*
41. *Id.*
42. 64 Fed. Reg. 14308 (March 24, 1999)

43. 64 Fed. Reg. 14508 (March 25, 1999)

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.*

50. *Id.*

51. 16 U.S.C. § 1533(b)(6)(C) (1999)

52. 16 U.S.C. § 1536 (1999)

53. 16 U.S.C. § 1533(b)(6)(C)(ii) (1999)

54. 50 C.F.R. § 424.12(b) (1999)

55. 50 C.F.R. § 424.19 (1999)

56. 50 C.F.R. § 424.18(a) (1999)

57. 16 U.S.C. § 1536 (1999)

58. 50 C.F.R. § 402.11-402.15 (1999)

59. *Pacific Rivers Council v. Thomas*, 30 F.3d 1050 (9th Cir. 1995)

60. *Pacific Rivers Council v. Thomas*, 30 F.3d 1050; *Sierra Club v. Babbitt*, 65 F.3d 1502 (9th Cir. 1995)

61. *Pacific Rivers Council v. Thomas*, 30 F.3d 1050

62. *Sierra Club v. Babbitt*, 65 F.3d at 1505
63. *Tennessee Valley Authority v. Hill*, 437 U.S. 153 (1978)
64. *Tennessee Valley Authority v. Hill*, 437 U.S. 153 (1978)
65. *Id.*
66. 50 C.F.R. § 402.04 (1999)
67. Section 7 Consultation Handbook
68. 50 C.F.R. § 402.11(a) (1999)
69. 50 C.F.R. § 402.11(b) (1999)
70. 50 C.F.R. § 402.11(c); 50 C.F.R. § 402.12(b) (1999)
71. 50 C.F.R. § 402.11(e) (1999)
72. 50 C.F.R. § 402.11(f) (1999)
73. 50 C.F.R. § 402.11(f)(1) (1999)
74. 50 C.F.R. § 402.11(f)(2) (1999)
75. 50 C.F.R. § 402.12(a) (1999)
76. 50 C.F.R. § 402.12(b) (1999)
77. Section 7 Consultation Handbook
78. Section 7 Consultation Handbook
79. 50 C.F.R. § 402.12(f) (1999)
80. 16 U.S.C. § 1536(a)(2) (1999)

81. Section 7 Consultation Handbook

82. 50 C.F.R. § 402.13(a) (1999)

83. 50 C.F.R. § 402.14(a) (1999)

84. 50 C.F.R. § 402.14(b) (1999)

85. Section 7 Consultation Handbook

86. Section 7 Consultation Handbook

87. Section 7 Consultation Handbook

88. Section 7 Consultation Handbook

89. 50 C.F.R. § 402.14(a) (1999)

90. 50 C.F.R. § 402.14(h)(3) (1999)

91. 50 C.F.R. § 402.14(l)(3) (1999)

92. 50 C.F.R. § 402.14(i) (1999)

93. 50 C.F.R. § 402.14(h) (1999)

94. 50 C.F.R. § 402.15(c) (1999)

95. 50 C.F.R. § 402.10(a) (1999)

96. 50 C.F.R. § 402.10(c) (1999)

97. 50 C.F.R. § 402.10(b) (1999)

98. 50 C.F.R. § 402.10(c) (1999)

99. 50 C.F.R. § 402.10(e) (1999)

100. 50 C.F.R. § 402.10(c) (1999)

101. 50 C.F.R. § 402.10(d) (1999)

102. *Id.*

103.

104. 16 U.S.C. § 1532(19) (1999)

105. 50 C.F.R. § 17.3 (1999)

106. *Id.*

107. 16 U.S.C. § 1538 (1999)

108. 16 U.S.C. § 1533(d) (1999)

109. 16 U.S.C. § 1539 (1999)

110. 50 C.F.R. § 451 (1999)

111. 16 U.S.C. § 1533 (1999)

112. 16 U.S.C. § 1533(d) (1999)

113. *Id.*

114. See 64 Fed. Reg. 73479 (December 30, 1999) (Steelhead); 65 Fed Reg 108 (January 3, 2000) (Tribal Lands); 65 Fed. Reg. 170 (January 3, 2000) (Chinook, Chum, Coho and Sockeye)

115. 65 Fed. Reg. 42422 (July 10, 2000); another rule applies solely to tribal resource management plans; 65 Fed. Reg. 42481 (July 10, 2000)

116. 65 Fed Reg 42472-73

117. *Id.*

118. *Id.*

119. 16 U.S.C. § 1539 (1999)

120. 16 U.S.C. § 1536 (1999)

121. 61 Fed. Reg. 63854 (December 2, 1996)

122. 50 C.F.R. § 222.22(b)(5) (1999)

123. *Id.*

124. 50 C.F.R. § 222.24(a) (1999)

125. 50 C.F.R. § 222.22(c)(2) (1999)

126. 61 Fed. Reg. 63854 (December 2, 1996)

127. *Id.*

128. 63 Fed. Reg. 8859 (February 23, 1998)

129. *Id.*

130. *Id.*

131. 16 U.S.C. § 1540 (1999)

132. *Id.*

133. 16 U.S.C. § 1540(a)(1) (1999)

134. *Id.*

135. 16 U.S.C. § 1540(b)(1) (1999)

136. *Id.*

137. 16 U.S.C. § 1540(g)(1) (1999)

138. 16 U.S.C. § 1540(g)(4) (1999)